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Joerg Barthel

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EXAMINER

MALEK, LEILA

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/517,743 | BARTHEL ET AL. | |
| | Examiner | Art Unit | |
| | LEILA MALEK | 2611 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14, 18-20, 23, 25, 26 and 34 is/are rejected.
- 7) ☒ Claim(s) 15-17, 21 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/09/2004 and 02/26/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Applicant's claim for the benefit of a prior-filed PCT application is acknowledged.
2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed on 12/09/2004.

Information Disclosure Statement

3. The information disclosure statements submitted on 12/09/2004 and 02/26/2007 have been considered and made of record by the examiner. The documents cited under "other documents" section of the IDS submitted on 02/26/2007, were not considered by the examiner, because the copies were not provided by the applicant.

Drawings

4. The drawings are objected to because Applicants fail to label the boxes properly, e.g., box 1 as demultiplexer/depacketizer and so on. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each

drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. Figures 4 and 5 should be designated by a legend such as --Prior Art—because, as recited by the Applicants on page 4, only that which is old ("conventional") is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claim 22 is objected to because of the following informalities: Claim 22 recites the limitation "the increment". There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

7. Claim 14 is objected to because of the following informalities: in claim 14, limitation "A method for generating a system time clock counter" is vague. Examiner suggests the Applicant to change the limitation to "A method for generating a system time clock".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 14, 18, and 19, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kovacevic et al. (hereafter, referred as Kovacevic) (US 6,674,805), in view of Fujii et al. (hereafter, referred as Fujii) (US 6,816,491).

As to claim 14, Kovacevic discloses a method, comprising: generating the digital data streams (see e.g. Fig. 50, wherein all the units work at digital mode, therefore, it inherently means that the incoming signal is in digital form) in a transmitting device by sampling at a sampling frequency synchronized by a system time clock in the transmitting device (see column 2, lines 27-32, wherein the time base of 27 MHZ has been interpreted as sampling frequency. The signal is in digital form, therefore it must be sampled according to the sampling frequency) and synchronizing the system time clock counter with the determined sampling frequency (i.e. 27 MHZ) of the one of the data streams (see column 2, lines 28-32). Kovacevic does not expressly disclose determining the sampling frequency of one of the data streams in the receiving device. Fujii, in the same field of endeavor, discloses a data decoder including a DSP unit 22 that extracts the necessary data, appropriately, from header information of an audio access unit, so as to decode the encoded data (see column 5, lines 31-33). Fujii further discloses that the header information include a sampling frequency, a bit rate and etc

(see column 5, lines 14-16). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Kovacevic as suggested by Fujii to extract the sampling frequency information at the receiver in order to facilitate the decoding process.

As to claim 18, neither Kovacevic nor Fujii disclose determining the sampling frequency from the data stream having the greatest sampling frequency of any of the available data streams. However, it is also well known in the art from Nyquist criterion that a required sampling rate for sampling a signal of frequency f_0 is at least twice the frequency of the signal. Therefore, one of ordinary skill in the art would have been motivated to use a sampling rate which is at least twice the sampling rate of the higher frequency so as to cover the sampling rate requirement of the lower frequencies as well.

As to claim 19, Kovacevic further discloses that the data streams are packetized elementary data streams (see Fig. 3) that include compressed video and audio data streams (see column 1, lines 58-59 and column 2, lines 27-30) according to the MPEG standard (see column 1, last paragraph).

9. Claims 20 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duruoz et al. (hereafter, referred as Duruoz) (US 6,363,207), Kovacevic, Fujii, and further in view of Kovacevic et al. (US 6,988,238).

As to claim 20, Duruoz discloses a receiver device (see the abstract), comprising: a transport data stream demultiplexer for demultiplexing a transport data stream into packetized elementary data streams (see the abstract and column 6, lines 43-45) and identifying a presentation time stamp for the purpose of initializing a system

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time clock counter (see column 2, lines 14-16) and an output control unit for synchronizing data streams obtained from the packetized elementary data streams (see column 1, lines 38-40, column 2, lines 23-26, column 9, lines 28-42). Duruoiz discloses all the subject matters claimed in claim 20, except for a unit for correctly determining a sampling frequency of one of the packetized elementary data streams and a synchronization unit for synchronizing the system time clock counter according to the sampling frequency. Duruoiz also does not disclose that the presentation time stamp has been identified by extracting flags. Kovacevic discloses a method, comprising: generating the digital data streams (see e.g. Fig. 50, wherein all the units work at digital mode, it inherently means that the incoming signal is in digital form) in a transmitting device by sampling at a sampling frequency synchronized by a system time clock in the transmitting device (see column 2, lines 27-32, wherein the time base of 27 MHZ has been interpreted as sampling frequency, the signal is in digital form, therefore it must be sampled according to the sampling frequency) and synchronizing (therefore inherently there is a synchronizing unit) the system time clock counter with the determined sampling frequency (i.e. 27 MHZ) of the one of the data streams (see column 2, lines 28-32). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Duruoiz as suggested by Kovacevic to prevent overflow or underflow of received compressed bit stream buffers (see column 2, lines 28-32). Kovacevic does not expressly disclose determining the sampling frequency of one of the data streams at the receiving device. Fujii, in the same field of endeavor, discloses a data decoder including a DSP unit 22 that extracts the necessary data, appropriately, from header

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information of an audio access unit, so as to decode the encoded data (see column 5, lines 31-33). Fujii further discloses that the header information include a sampling frequency, a bit rate and etc (see column 5, lines 14-16). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Duruoaz and Kovacevic as suggested by Fujii to extract the sampling frequency information at the receiver in order to facilitate the decoding process. Duruoaz, Kovacevic, and Fujii, disclose all the subject matters claimed in claim 20, except that the presentation time stamp has been identified by extracting flags. Kovacevic et al. discloses an apparatus for detecting and handling MPEG transport stream errors (see column 1, first paragraph). Kovacevic et al. further discloses that a presentation time stamp (PTS) has been identified by extracting flags (see columns 45-46). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Duruoaz, Kovacevic, and Fujii as suggested by Kovacevic et al. to facilitate the recovery of the presentation time stamps.

As to claim 23, Kovacevic further discloses that the synchronization unit compares an instantaneous value of the presentation time stamp of the packetized elementary data stream used to determine the sampling frequency with an instantaneous count of the system time clock counter, and the synchronization unit corrects an increment of the system time clock counter according to a comparison result (see column 2, lines 11-15 and column 43, lines 9-16). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Duruoaz as suggested by Kovacevic to prevent overflow or underflow of received compressed bit stream buffers (see column 2, lines 28-32).

As to claim 24, Fujii discloses a data decoder including a DSP unit 22 that extracts the necessary data, appropriately, from header information of an audio access unit, so as to decode the encoded data (see column 5, lines 31-33). Fujii further discloses that the header information include a sampling frequency, a bit rate and etc (see column 5, lines 14-16). Fujii does not disclose an output control unit that synchronizes all packetized elementary data streams with the system time clock counter. However, Kovacevic discloses that the value of the STC counter is synchronized such that the value of the STC counter can be compared to PTS time stamps to determine when the data is to be decoded (See column 43, lines 9-16). Kovacevic further discloses that by comparing the values of the PTS time stamps to the STC and rendering the data associated with the PTS time stamps when a match occurs, synchronized presentation of audio and video data is obtained (see column 2, lines 11-15). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Duruoz as suggested by Kovacevic to prevent overflow or underflow of received compressed bit stream buffers (see column 2, lines 28-32).

As to claim 25, none of the above references disclose determining the sampling frequency from the data stream having the greatest sampling frequency of any of the available data streams. However, it is also well known in the art from Nyquist criterion that a required sampling rate for sampling a signal of frequency f_0 is at least twice the frequency of the signal. Therefore, one of ordinary skill in the art would have been motivated to use a sampling rate which is at least twice the sampling rate of the higher frequency so as to cover the sampling rate requirement of the lower frequencies as well.

As to claim 26, Duruoz further discloses that the data streams are packetized elementary data streams (see Fig. 3) that include compressed video and audio data streams according to the MPEG standard (see column 1, lines 15-18).

Allowable Subject Matter

10. Claims 15-17 and 21, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEILA MALEK whose telephone number is (571)272-8731. The examiner can normally be reached on 9AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Leila Malek
Examiner
Art Unit 2611

/L. M./
/Leila Malek/
Examiner, Art Unit 2611

/Mohammad H Ghayour/
Supervisory Patent Examiner, Art Unit 2611